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Application Number 10/799043
Response to the Office Action dated 03/27/2008

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

1. (Currently Amended) A solar cell comprising a first electrode layer, a second electrode layer, a p-type semiconductor layer disposed between the first electrode layer and the second electrode layer, and a layer A disposed between the second electrode layer and the p-type semiconductor layer,

wherein the layer A comprises Zn, Mg, O, and at least one element M selected from Ca, Sr, Ba, Al, In, and Ga;

wherein a content of the element M in the layer A is in the range of 0.01 to 3 atom percent;

wherein a ratio of atom numbers between Zn, Mg, and O comprised in the layer A satisfies an expression $\text{Zn:Mg:O} = (1-x):x:1$, where x is a numerical value that satisfies an expression $0.05 \leq x \leq 0.35$; and

wherein a photoelectromotive force is generated due to light that is incident from the second electrode layer side.

2. (Original) The solar cell according to claim 1,

wherein the element M is at least one element selected from Ca, Sr, and Ba.

3. (Canceled)

4. (Currently Amended) The solar cell according to claim [[3]]1,

~~wherein a content of the element M is at least one element selected from Al, In, and Ga in the layer A is not more than 3 atom percent.~~

5. (Canceled)

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6. (Original) The solar cell according to claim 1,
wherein a volume resistivity of the layer A is not more than $1 \times 10^{12} \Omega \cdot \text{cm}$.
7. (Original) The solar cell according to claim 1,
wherein the p-type semiconductor layer is a compound semiconductor that
comprises at least one element selected from Cu, In, and Ga, and at least one element
selected from Se and S.
8. (Original) The solar cell according to claim 1, further comprising:
an n-type semiconductor layer disposed between the p-type semiconductor layer
and the layer A;
wherein the n-type semiconductor layer is a compound semiconductor that
comprises Zn, at least one element selected from Cu, In, and Ga, and at least one element
selected from Se and S.
9. (Original) The solar cell according to claim 1,
wherein the first electrode layer is made of Mo, and the second electrode layer is a
transparent electrode.
- 10-15. (Canceled)